



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,551	10/15/2003	Pascale Abadie	BREV121835	7694
26389	7590	02/07/2007	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC			ANTHONY, JOSEPH DAVID	
1420 FIFTH AVENUE				
SUITE 2800			ART UNIT	PAPER NUMBER
SEATTLE, WA 98101-2347			1714	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/07/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,551	ABADIE ET AL.	
	Examiner	Art Unit	
	Joseph D. Anthony	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 1/19/07 as an RCE.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5, 7-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION AFTER FILING OF RCE

1. Please note that the pending claims in the present application are the claims as amended by the examiner in the examiner's amendment mailed with the now vacated notice of Allowability.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5 and 7-15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a polymerized setted or cured material for neutron shielding comprising a matrix based on a vinylester, at least one polyamide and an inorganic filler comprising at least one hydrogenated inorganic compound and at least one inorganic boron compound, does not reasonably provide enablement for a NON-polymerized material that are effective for neutron shielding, see column 10, lines 15-30, column 12, lines 25-31 and examples. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 16 is indefinite because the preamble of the claim requires that the material for neutron shielding has at least one inorganic boron compound but the actual process steps set forth in the body of the claims as not requirement for any addition of at least one boron compound.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5 and 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel U.S. Patent Number 3,609,372 optionally in view of Forsyth U.S. Patent Number 3,879,318.

Vogel teaches a polymeric material having a shielding effect against radiation is provided in the form of a shaped body which may be a plate, flexible sheet, or of any other desired shape, which body consists essentially of a synthetic plastic material including synthetic rubber, or of natural rubber, having distributed there through and

Art Unit: 1714

intimately mixed therewith an effective amount of at least one compound of a saturated fatty acid being solid at room temperature and having at least 9 carbon atoms with at least one metal selected from the group consisting of lead, bismuth, tungsten, zirconium, iron, tin, cadmium, lithium and barium, see abstract. The synthetic plastic material can be selected from a number of different materials such as unsaturated polymerizable polyesters and polyamides, see column 1, lines 62-66. Vogel's unsaturated polymerizable polyesters read directly on applicant's claimed vinylester resin of independent claims 1 and 16. The preferable further incorporation of a boron compound such as boron carbide, boric acid or boron trioxide is directly taught, see column 2, lines 6-18, and the examples. Please note that when boric acid is selected as the boron compound it also fulfills applicant's requirement for there being at least one hydrogenated inorganic compound. Vogel's invention can be said to differ from applicant's claimed invention in that there is not a direct teaching to the use of an admixture of unsaturated polymerizable polyester with a polyamide to form the matrix.

It would have been obvious to one having ordinary skill in the art to use the broad disclosure of Vogel to make an admixture of unsaturated polymerizable polyester with a polyamide to form the matrix since both unsaturated polymerizable polyesters and polyamide are disclosed by Vogel. Furthermore, the courts have constantly declared that to employ two or more materials in combination for the same purpose they are taught as being individually useful is not patentable outside a showing of superior and unexpected results, see *In re Kerhoven*, 205 USPQ 1069 (CCPA 1980).

In the alternative, Vogel can be taken in view of Forsyth who teaches methods for producing a controlled increase in viscosity of uncured polyester resin compositions and maintaining desired viscosity for extended periods comprising admixing with said uncured polyester resin an organic amide in specified proportions as thickening controller in combination with conventional alkaline earth oxide or hydroxide thickening agent. Unsaturated polyester compositions containing organic amide thickening control agent; compositions comprising mixtures of organic amide thickening controller and alkaline oxide or hydroxide thickening agent; compositions comprising a mixture of thermoplastic polymer low shrink modifier and thickening controller and optional colorants and pigments; and sheet molding compounds of moldable viscosity are disclosed, see abstract, column 1, lines 5-8, and column 2, lines 65-68.

It would have been obvious to one having ordinary skill in the art to use the disclosure of Forsyth's to the advantageous of using mixtures of unsaturated polyester resins in combination with a polyamide followed by setting or curing this mixture as strong motivation to actually use such mixtures in Vogel's invention.

8. Claims 7 and 9 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel U.S. Patent Number 3,609,372 in view of anyone of the following: English Language Translation of French Patent Number 2,546,331 A1 or the English Language Translation of Japan Patent Number 55-119099 or Nihei et al. U.S. Patent Number 6,605,817; all said combination individually and optionally in view of Forsyth U.S. Patent Number 3,879,318.

This rejection builds on the rejection above. Vogel itself differs from applicant's claimed invention in that there is not a direct disclosure to the further addition of at least one hydrogenated inorganic compound, such as alumina hydrate.

The French Patent directly teaches that it is known in the art to make antineutron protection materials that comprising a cured mixture of alumina hydrate, boron carbide and a resin binder, see page 2, line 15 to page 3, line 30 of the English Language Translation.

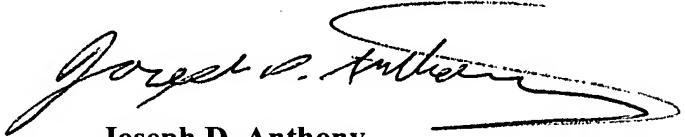
The Japan patent teaches neutron shielding material comprising a cured mixture of an unsaturated polyester resin, polyethylene powder and aluminum hydroxide as a neutron absorber and as a flame retardant.

Nihel et al teaches a neutron shield formed by blending two-part reactive cold-setting epoxy resin consisting of long-chain aliphatic glycidyl ether epoxy resin containing reactive diluent as main component, and a mixture of alicyclic polyamine, polyamide polyamine, aliphatic polyamine and epoxy adduct as hardener of the two-part reactive cold-setting epoxy resin, aluminum hydroxide of high purity with impurity soda content of 0.07% by weight or less, and boron carbide is used as resin of a cask, see abstract.

It would have been obvious to one having ordinary skill in the art to use the teaching of anyone of the secondary references as strong motivation to actually add an aluminum hydroxide component to the polymerizable mixture of Vogel as an additional neutron absorber and as a flame retardant.

Examiner Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.


Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714


2/4/07